STATE OF MINNESOTA OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE COMMISSIONER OF NATURAL RESOURCES

In the Matter of Permit Application No. 2004-1082 of Frank Spartz

FINDINGS OF FACT, CONCLUSIONS AND RECOMMENDATIONS

Administrative Law Judge Bruce H. Johnson conducted a hearing in this administrative contested case proceeding beginning at 9:30 a.m. on June 23 and 24, 2004, at the Cass County Courthouse Annex, 303 Minnesota Avenue, Walker, Minnesota. The hearing record closed on August 25, 2004, when all of the parties' post-hearing submissions were received.

David P. Iverson and Jennifer DeKarske, Assistant Attorneys General, 445 Minnesota Street, Suite 900, St. Paul, Minnesota 55101-2127, represented the Department of Natural Resources (the Department) at the hearing. William G. Peterson, Attorney at Law, 3601 Minnesota Drive, Suite 800, Bloomington, Minnesota 55435 represented the Applicant, Frank Spartz.

NOTICES

This Report is only a recommendation to the Commissioner of the Department of Natural Resources and is <u>not</u> a final decision. The Commissioner will make his final decision after reviewing this report and the hearing record. In making that decision the Commissioner may adopt, reject or modify the Findings of Fact, Conclusions, and Recommendation that appear in this report.

Under Minnesota Law,^[1] the Commissioner may not make his final decision until after the parties have had access to this Report for at least ten days. During that time the Commissioner must give any parties adversely affected by this Report an opportunity to file objections to the Report and to present argument supporting their positions. Parties should contact the office of Gene Merriam, Commissioner of Natural Resources, 500 Lafayette Road, St. Paul, Minnesota 55155, to find out how to file exceptions or present argument.

The record of this contested case proceeding closes upon the filing of comments on the report with the Commissioner, or upon the expiration of the deadline for doing so. The Commissioner must notify the parties and the Administrative Law Judge of the date on which the record closes. If the Commissioner fails to issue a final decision

within 90 days of the close of the record, this report will constitute the final agency decision. [2]

STATEMENT OF THE ISSUE

Whether or not Applicant has established by a preponderance of the evidence that his permit application to retain riprap along the shoreline of Wabedo Lake is reasonable, practical, and will adequately protect public safety and promote the public welfare.

Based upon the record in this matter, the Administrative Law Judge makes the following:

FINDINGS OF FACT

1. The Applicant, Frank Spartz, is currently retired, having been previously employed as an electrician for the Minneapolis school system. He resides at 14834 Timberhill Road, Minnetonka, Minnesota 55345. In about 1994, he purchased the property in question in this proceeding—namely, a parcel of lake front property located at 1620 Wabedo Park Road, N.E., on Wabedo Lake in Cass County, Minnesota (the Spartz Property). At all times relevant to this proceeding, Mr. Spartz owned the Spartz Property. [3]

Location of the Spartz Property:

- 2. Wabedo Lake is an 1,185-acre lake located near Longville, Minnesota. It has a maximum depth of 95 feet, and approximately twenty-five percent of the lake is less than fifteen feet deep. The lake is roughly oriented along a northeast-southwest axis, with the Spartz property situated on a point on the lake's eastern shore. The elevation of the lake's ordinary high water line (OHWL) is 1,308.1 feet above mean sea level, and on September 4, 2003, the lake level elevation was 1,306.96 feet.
- 3. The Spartz Property is a platted lot in Kirk's Wabedo Park about 1-1/2 acres in area and oriented along a northwest-southeast axis. The northwest property line is irregularly shaped and consists of approximately 580 feet of lake frontage, and the southeast property line consist of about 140 feet of frontage along Stoney Creek Road. On average, the lot is about 800 feet deep. [8]
- 4. The Spartz property cannot be subdivided. ^[9] Currently, the only improvements on the property are a small, 300 sq. ft. cabin, an adjoining shed, and a movable dock. ^[10] Mr. Spartz currently uses the property for seasonal recreation. ^[11]

Hydrologic and Soil Conditions:

- 5. The elevation along the shoreline of the Spartz property varies from being quite low in some locations but rising to a height of about 5 feet above the ordinary high water line (OHWL) in others. The lake bottom along the shoreline generally consists of hard sand and cobble. Larger cobble and rocks can be found in some locations on the banks of the Spartz Property shoreline, and in the adjacent lake bottom. It is uncertain whether the presence of that larger cobble and rock is the result of prior riprapping or of natural processes. [14]
- 6. The shoreline of the Spartz Property is not subject to high wave action erosion. The maximum open water fetch from the western shore of Wabedo Lake toward the property is approximately one mile. On average, such a fetch produces one-foot waves in winds of 35 miles per hour. The Spartz Property is subject to westerly winds of 35 miles per hour or more only one to two percent of the time. Moreover, wave action is attenuated in shallow water, and the lake bottom along the Spartz Property is generally shallow, with water only twelve to eighteen inches deep as far as 100 yards from the shoreline in some places.
- 7. Analysis of the soil near the landward edge of riprap that was placed along the Spartz Property shoreline on December 2002 indicates a top layer consisting mainly of fine-to-medium-grained sand to a depth of approximately 1-1/2 feet followed by a layer consisting mainly of silty clay to a depth of three feet. That soil type is highly erodable, but there is sufficient rock and vegetation on the surface to prevent significant erosion. Those soil conditions are common along all of Wabedo Lake's shoreline and throughout most of that part of Cass County.

Upland Vegetation and Species:

- 8. Although turf has been planted in portions of the interior of the Spartz Property, on most parts of the lot the shoreline is separated from the turf by a corridor of trees, shrubs, and other upland vegetation. So, the areas of the lot immediately adjacent to the shoreline are mainly wooded, and prior to December 2002, upland vegetation extended down close to the water's edge in most places. [22]
- 9. The corridor of upland vegetation that parallels the Spartz Property shoreline has a high value as habitat for small mammals and birds. The immediate shoreline area provides habitat for several amphibian species.

Aquatic Vegetation and Species:

10. The most significant species of rooted aquatic plant in the lake adjacent to the Spartz Property shoreline are bulrushes. Bulrushes tend to thrive in the shallow portions of lakes—i.e., in water depths from inches to seven feet—that have sand and cobble bottoms, such as the lakebed adjacent to the Spartz Property. Bulrush seeds must germinate on dry land, but once the seeds germinate, the emerging plant needs to be inundated in the water to continue to survive. Once the plants start to grow in the water, they can continue to propagate waterward by producing rhizomes beneath the lakebed. Placing riprap on top of a bulrush plant kills the plant.

- 11. The bulrush stands begin along the north shore of the property approximately 45 feet east of the point where Mr. Spartz places his dock. The stands then extend westward to the point, around the point, and then down the western shoreline for a distance of approximately 130 feet. In terms of width, the bulrush stands adjacent to the Spartz Property begin at the water's edge and extend waterward for a distance of about 150 feet. Those bulrush stands tend to be more luxuriant next to the shoreline and somewhat sparser farther from shore.
- 12. The root systems of bulrush plants hold soil together and prevent erosion. Bulrush stands can also reduce shoreline erosion by dampening wind and wave action directed at the shoreline. The value of bulrush stands in preventing shoreline erosion depends on their density and proximity to the shoreline, with closer, denser stands providing more erosion protection. Gall
- 13. Wabedo Lake offers a high quality recreational fishery that includes muskellunge, black crappie, northern pike, walleye pike, smallmouth bass, largemouth bass, bluegill, cisco, and yellow perch. Recently, the Department has been stocking the lake with about 600,000 walleye fry each year. [31]
- 14. Bulrush stands represent significant habitat for the fish species in Wabedo Lake. [32] At different times during their life cycles, bass, northern pike, walleye pike, muskellunge, and various pan fish use bulrush stands for feeding areas, spawning, and cover. [33] Bulrush stands also serve as feeding and cover areas for duck and herons. [34]

Mr. Spartz' Initial Permit Application:

- 15. Sometime during the summer of 2001, Mr. Spartz began discussions with Ted Ebnet, the owner of Lakeshore Construction located in Pequot Lakes, about having Mr. Ebnet install riprap along portions of the shoreline of the Spartz Property. Mr. Spartz wanted to install riprap as protection against what he considered to be shore erosion. See Property 15.
- 16. In September 2002, Mr. Ebnet conducted a site inspection of the Spartz Property and observed what he believed to be evidence of erosion of portions of the shoreline. Thereafter Mr. Ebnet provided Mr. Spartz with an estimate and proposal to perform riprapping along approximately 410 feet of the Spartz Property shoreline. [37] Mr. Ebnet proposed to wait until after the lake froze in the winter before performing the work, so that he could work from the ice surface and minimize any damage to the property and adjacent waters. [38]
- 17. In November 2002, Mr. Ebnet made another site inspection of the Spartz Property, during the course of which he took photographs of those portions of the shoreline that appeared to Mr. Ebnet to have been subject to active erosion. At the time of that site inspection, much of the Spartz property, including banks and shoreline, were covered with a layer of snow, and a layer of ice had formed on the adjacent waters of Wabedo Lake.

- 18. Sometime prior to December 2, 2002, Mr. Ebnet placed between sixteen and thirty-two tons of Class 5 riprap on upland portions of the Spartz Property in preparation for the proposed work. [41]
- 19. On or about November 29, 2002, Mr. Spartz prepared an application for a Shoreline Alteration Permit for consideration by the Cass County Environmental Services Department. The application sought permission to place riprap along approximately 410 feet, more or less, of the Spartz Property shoreline. Mr. Spartz indicated that no riprap would be placed on about the easternmost 90 feet of the property's northern shoreline or on about the southernmost 90 feet of the western shoreline. The application stated that, "Some areas eroding." [43]
- 20. Mr. Spartz' submitted his permit application to Cass County (the County) on December 3, 2002. But prior to that, he had notified the County of his intention to submit an application. So, on or about December 2, 2002, County inspector Robert Wright and enforcement officer Keith Haggestad made a site inspection of the Spartz Property and the proposed work. [44]
- 21. The County's shoreline alteration ordinance provides that, "Rock riprap will only be allowed in situations where active erosion problems exist." The County's Environmental Services Department interprets the term "active erosion" to mean that there is evidence of significant areas of bared soil, of slumping of banks, or of significant sedimentation. [46]
- 22. Based on their inspection of the Spartz Property on December 2, 2002, Messrs. Wright and Haggestad observed some evidence of isolated undercutting of banks but no evidence of slumping of banks or baring of soil. Based on their observations, Messrs. Wright and Haggested concluded that there was no evidence of active erosion problems on the shoreline, within the meaning of the County shoreline ordinance, and they recommended that the County deny Mr. Spartz' permit application. [47]
- 23. Thereafter, the County inspectors reported their conclusion of no active erosion problems on the Spartz Property, and the reasons for that conclusion, to the County's Environmental Services Department. On or about December 3, 2002, John Sumption, the Deputy Director of the County Environmental Services Department, and inspector Robert Wright met at the Spartz Property with Ted Ebnet, Mr. Spartz' riprap contractor. The three men conducted a joint inspection of the shoreline after which Mr. Sumption advised Mr. Ebnet that the permit application was being denied because of the lack of evidence of active erosion. [48]
- 24. On December 6, 2002, Enforcement Officer Haggestad contacted Mr. Spartz and advised him that his county permit application had been denied. [49]
 - 25. The County's shoreline alteration ordinance also provides that:

Any alteration below the ordinary high water level may requires (sic) approval from the Department of Natural Resources and/or U.S. Army Corps of Engineers. [50]

- 26. After Mr. Spartz' County permit application was denied, neither Mr. Spartz, Mr. Ebnet, nor anyone acting on their behalf contacted the Department to determine whether a state permit was required for the proposed riprap project anytime before work on that project was completed in late December 2002. [51]
- 27. On or about December 18, 2002, an official from the County's Environmental Services Department called Kirk English, the Department's Area Hydrologist, and advised him that the County had received an application from Mr. Spartz proposing a riprap project on the shoreline of Wabedo Lake. Mr. English was further advised that the County had determined that the project did not respond to any erosion problem. In response, Mr. English advised the County that it should advise Mr. Spartz that he would need a permit from the Department to perform the proposed work. [52]

Performance of the Riprap Work:

- 28. Prior to October 14, 2002, Minn. R. pt. 6115.0191, subp. 2 (2001), set forth the requirements for placing riprap on lake shoreline. In substance, the rules allowed property owners to do work of that kind without a permit issued by the Department so long as the work met the following criteria:
 - Supb. 2 **Riprap shore protection.** The protection of shoreline from continued erosion by placement of natural rock riprap along the shore shall be permitted provided:
 - A. The riprap materials were of sufficient size, quality, and thickness to withstand ice and wave action. The riprap shall be placed with a minimum amount of space between the larger materials and the space between them shall be filled with firmly seated smaller rocks or gabion baskets to procure a uniform surface.
 - B. The site soils are capable of supporting riprap and a filter consisting of well-graded gravel, crushed stone, or fabric is installed to prevent undercutting of the riprap.
 - C. The encroachment into the water is the minimum amount necessary to provide protection and does not unduly interfere with the flow of water.
- 29. On October 14, 2002, the rule described in Finding No. 28 was repealed and replaced by a new rule establishing permit requirements and exemptions for shoreline riprap work. One part of the new rule—Minn. R. pt. 6115.0215, subp. 4, sets forth exemptions from the general rule requiring a permit for work performed in the

public waters of the state. Subpart E. of that rule provides, that no permit is required for riprapping of shorelines if several criteria are met, among which is:

- (5) the total length of shoreline to be affected does not exceed 200 feet for public waterbasins or public water wetlands or five times the width of the public watercourse measured at bank full conditions;
- 30. Mr. Ebnet was unaware of the October 14, 2002, change in applicable rules. He advised Mr. Spartz that the proposed riprapping would not require a County permit so long as the work did not impact shoreline above the OHWL. Mr. Ebnet also expressed his opinion that although the shoreline riprapping would take place below the OHWL, it would not require a permit from the Department because it would protect Mr. Spartz' shoreline from "continuous erosion" and would meet the riprapping standards set forth in Minn. R. pt. 6115.0191, subp. 2A through C (2001). Based on Mr. Ebnet's advice, sometime in mid-December 2002 Mr. Spartz instructed him to proceed with the riprapping project in accordance with the proposal.
- 31. Thereafter, sometime between mid- to late December 2002, Mr. Ebnet staked what he considered to be the OHWL along the shoreline of the Spartz property. And on December 28 and 29, 2002, he installed riprap on approximately 410 feet of the Spartz property shoreline (sometimes referred to as the Spartz Project). Working from the frozen lake surface adjacent to the property, Mr. Ebnet placed the toe end of the riprap, consisting of rocks averaging 2-1/2 feet in diameter, in a trench in the lakebed that was below the existing water line and followed the shoreline of the property. Landward of that, he laid down a bed of three-inch to six-inch cobble about twelve to fourteen inches deep. That bed began in the water behind the barrier and extended onto the adjacent shoreline and bank for an average width of six and one-half feet. Mr. Ebnet then placed a layer of rocks that were twelve to eighteen inches in diameter over the cobble bed. Portions of the riprap extended above the OHWL.
- 32. The riprapping that Mr. Ebnet performed on the Spartz Property on December 28 and 29, 2004, covered portions of emergent bulrush stands that were immediately adjacent to the shoreline. Mr. Spartz has never applied for or received an aquatic plant management permit from the Department. [62]
- 33. Neither Mr. Spartz nor Mr. Ebnet informed the County or the Department that riprap work had been performed along the shoreline of the Spartz Property on December 28 and 29, 2004.

Responses to the Riprap Work:

34. On or about April 1, 2003, and after receiving a complaint that riprap had been installed on the Spartz Property shoreline, County Inspector Robert Wright made a site investigation of the property and observed the riprap work that Mr. Ebnet had performed in late December 2002. Mr. Wright took photographs of the work^[63] and

reported the results of his site investigation to County Enforcement Officer Keith Haggestad. [64]

- 35. On April 3, 2003, County Enforcement Officer Haggestad issued a misdemeanor citation for violating § 1704.D of the County's land use ordinance—that is, for altering the shoreline of the Spartz Property without obtaining a County Shoreline Alteration Permit. [65]
- 36. On or about April 15, 2003, an engineering and survey firm, Landecker & Associates, Inc., had performed a survey to establish the location of the OHWL on the Spartz Property and had placed stakes with orange flags along that line. [66]
- 37. On April 28, 2003, Kirk English, the Department's Area Hydrologist prepared a Water or Wetland Activity Report indicating that he had received information from the County that Mr. Spartz had placed riprap along 410 feet of the Spartz Property shoreline without first obtaining a DNR Public Waters Permit. [67]
- 38. On the following day, Mr. English, accompanied by Conservation Officer Douglas Sandstrom and Area Fisheries Supervisor Harlan Fierstine, made a site inspection of the property, during which Mr. English took a number of photographs. [68]
- 39. Based on that site inspection, it was Mr. English's opinion that the riprap project failed to meet the conditions established by Minn. R. pt. 6115.0215, subp. 4E for a permit exemption in the following respects: [69]
 - (1) There did not appear to be a demonstrated erosion problem, although this was somewhat difficult to ascertain since the natural shoreline was obstructed by riprap. However, the adjacent shoreline on either end of the riprapped segment did not have any evident erosion. Also, it is well documented by Cass County Environmental Services Department that there was no active erosion taking place along Spartz' shoreline.
 - (2) Much of the rock was extremely large in size, being several feet in diameter. Entire sections of shoreline were covered almost exclusively with such large rock, although we did not determine whether or not the average rock diameter of the project as a whole was within the 6-inch to 30-inch range. However, these large rocks (actually boulders) were definitely not appropriately sized for the erosion potential of the wave or current action for this location on Lake Wabedo.
 - (3) The finished slope of rock was steeper than 3:1 along parts of the shoreline, primarily due to the large size of rock that was used in some places.
 - (4) The length of the shoreline that was riprapped was measured to be 410 feet, more than twice the length of shoreline that may be riprapped without a public waters work permit.

- (5) Significant stands of bulrush were observed along the shoreline, right up to the edge of the riprap. Although we could not make a positive determination whether or not some of the bulrush was covered with riprap, it is certainly possible that it was. Mr. Spartz did not obtain an aquatic plant management permit.
- (6) There was no granular filter material or filter fabric placed beneath the rock that we were able to observe.
- (7) Some of the rock was covered with soil material. It is quite likely that even more soil was mixed with the rock when it was originally installed. Much of the soil had likely already been washed into the lake by runoff or wave action.
- 40. On June 2, 2003, Mr. Spartz entered a guilty plea to the County's misdemeanor charge in Cass County District Court. The District Court entered a stay of adjudication for a period of two years on condition that Mr. Spartz work with the County Environmental Services Department abide by [that Department's] reasonable expectations." [71]
- 41. By letter dated June 16, 2003, the County Environmental Services Department directed Mr. Spartz to bring his property into compliance with County Ordinances by September 8, 2003. [72]
- 42. On September 8, 2003, County Inspector Robert Wright conducted a site inspection of the Spartz Property to determine whether or not Mr. Spartz had complied with the County's June 16, 2003, directive. It was Mr. Wright's observation that riprap was still present landward of the Landecker survey's stakes and, therefore, above the OHWL and within the County's shoreline regulatory jurisdiction. At that time, Mr. Wright took photographs to document his observations.
- 43. Sometime after September 8, 2003, Mr. Spartz had all riprap above the OHWL removed and, therefore, came into compliance with County Ordinances. [75]

After-the-Fact Permit Application:

- 44. On October 13, 2003, Mr. Spartz submitted an application for an after-the-fact DNR permit for the riprap work that was performed on December 28 and 29, 2002. [76]
- 45. On November 21, 2003, Kirk English, the Department's Area Hydrologist, made another site inspection of the property in connection with Mr. Spartz' after-the-fact permit application, during which he took additional photographs. After making that site inspection, Mr. English evaluated the project and recommended that the Department deny the after-the-fact permit application. Mr. English's recommendation was based on the following conclusions:
 - a. There was no demonstrated need, in terms of continuous erosion, to justify the project's encroachment on public waters;
 - b. Bulrush stands and other fish and wildlife habitat were affected by the project;
 - c. The minimal impact solution was to have no riprap on the shoreline;
 - d. The County had denied Mr. Spartz' application for a shoreline alteration permit;
 - e. There were no other stretches of riprap along Lake Wabedo's shoreline; and
 - f. There was no evidence of continuous erosion. [79]
- 46. By email dated December 11, 2003, the County recommended that the Department deny Mr. Spartz' after-the-fact permit application because, in the County's view, Mr. Spartz' shoreline was not subject to "active erosion," and also because Mr. Spartz had earlier violated an ordinance by completing the project without a County permit. [80]
- 47. On April 29, 2003, Harlan Fierstine, the Department's Area Fisheries Supervisor, made a site inspection of the Spartz Property. At that time he observed no visible signs of erosion on either the riprapped or unriprapped portions of the shoreline. He observed luxuriant bulrush growth along much of the riprapped shoreline, and that a "minor amount" of the bulrush growth had been covered by the riprap.^[81]
- 48. On December 16, 2003, Harlan Fierstine, the Department's Area Fisheries Supervisor, recommended that the Department deny Mr. Spartz' after-the-fact permit application for the following reasons:
 - "There is no apparent reason for the riprap. During the field inspection, no evidence could be found that there was any shoreline erosion occurring. Cass County Environmental Services

personnel inspected the site before riprap was placed and they stated there was no shoreline erosion."

" Emergent aquatic vegetation is dense offshore of most of the site. The riprap is negatively impacting this vegetation near shore."

"Near-shore and shoreland areas are critical habitats for fish populations and associated water dependent wildlife. Studies conducted in Wisconsin have documented negative changes in amphibians and fish communities due to the placement of riprap on natural shorelines. The placement of riprap by the applicant on the shoreline of Wabedo Lake that had no evidence of shoreline erosion has degraded near-shore habitat that is critical to fish and amphibians."

49. By letter dated December 16, 2003, a Commissioner's Order was entered denying Mr. Spartz' after-the-fact permit application for the following reasons:

"Our site inspection, after the work had been completed, revealed that upland vegetation adjacent to the shoreline was in its natural, undisturbed condition and consisted of a variety of trees, shrubs, and grasses that provided excellent stabilization of the shoreline and protection from erosion. Dense stands of emergent aquatic vegetation were growing in the water along much of the shoreline where the riprap had been installed. Such vegetation also helps to prevent shoreline erosion. In several locations, the riprap encroached into the vegetation, negatively impacting it. At each end of the project area, where no riprap had been installed, the shoreline consisted of a gentle slope that was covered with a layer of predominantly cobble-sized stones. The shoreline was very stable and well protected by the natural lakebed material and the upland vegetation growing along the shore. No erosion was observed."

"The maximum open water fetch at the project site is approximately one mile from the west, although open water fetch from most directions is considerably less. Open water exposure such as this is not likely to result in wave action of a magnitude to cause erosion if the bank and shoreline are maintained in natural vegetation."

"Near-shore and shoreland areas are critical habitats for fish populations and associated water-dependent wildlife. Studies have been conducted documenting negative changes in amphibians and fish communities due to the installation of riprap on natural shorelines. The installation of riprap by Mr. Spartz, where there was no evidence of shoreline erosion, has unnecessarily degraded such near-shore and shoreland habitat." [82]

50. After the Commissioner's Order was issued, the Applicant made a demand for a public hearing, as allowed by statute. [83]

51. On May 17, the Commissioner issued a Notice and Order for Hearing in this matter. That Notice and Order for Hearing was duly published on June 3 and 10, 2004, [84] and this contested case proceeding ensued.

Other Expert Opinions:[85]

- 52. Rob Naplin, the Department's Area Wildlife Supervisor, reviewed photographs of the Spartz Property taken when Department personnel conducted site inspections during open water periods in 2003. Mr. Naplin also conducted his own site inspection of the property on June 8, 2004. Based on that information and those personal observations, Mr. Naplin expressed the following opinions:
 - a. Although there was turf on the interior of the Spartz property, Mr. Naplin observed that the turf areas were separated, for the most part, from the bank and shoreline by a buffer zone of natural vegetation that included trees and shrubs. It was Mr. Naplin's opinion that the buffer zone represented a corridor through which wildlife can travel from shoreline to upland under cover. It was his further opinion that the riprap that had been placed along the bank functioned as a barrier that prevented wildlife from using that corridor. [88]
 - b. Mr. Naplin concluded that the composition of the shoreline before the riprap was installed consisted of scattered pebbles, rocks, and boulders combined with emergent vegetation and tree roots. In his opinion, that represented quality habitat for several species, including reptiles, amphibians, such as frogs and toads, small mammals, such as mice, voles, and shrews, and aquatic mammals such as muskrat. Mr. Naplin further concluded that, combined with the bulrush stands in near-shore waters, the shoreline of the Spartz Property also was previously valuable as a feeding and cover area for wetland birds, such as ducks and herons. It was Mr. Naplin's opinion that riprap of the size and extent of what had been installed along the Spartz Property shoreline had degraded the value of all those wildlife habitats and, therefore, had an adverse impact on wildlife.
- 53. James Holland, a registered Professional Engineer and member of the firm of Pinnacle Engineering, made a site inspection of the Spartz Property in May 2004. Among other things, Mr. Holland performed a soil boring at a location along the shoreline that was below the OHWL and performed a soil analysis of that boring. The boring revealed soil consisting mainly of fine-to-medium-grained sand, with trace coarse sand and gravel and some silt and clay for a depth of 1.5 feet below the surface. Below that was a layer of silty clay, with some fine sand and medium and coarse sand from 1.5 feet to 3.0 feet below the surface. And below that was a layer of fine-to-medium-grained sand, with some silt, a little coarse sand and clay, and trace gravel from 3.0 to 4.0 feet below the surface. The water level was 2.5 feet below the surface of the ground. Based on the results of the soil analysis and his observations at the site, Mr. Holland made the following observations and expressed the following opinions at the hearing:

- a. The upper 1.5 feet of soil on the bank where the boring was made was "highly erodable soil." The soil types and profile that the boring disclosed were common in the general vicinity of Wabedo Lake.
- b. The point of land where the Spartz Property extends out into Wabedo Lake is exposed to wave action and represents a "highly battered position" with respect to wind and waves, while the northeast and southwest shorelines tended to be protected from wave action.
- c. Mr. Holland observed a weathered tree stump, approximately 5-1/2" in diameter, in the water approximately four feet out from the toe of the ripraped bank near the eastern edge of the riprap installation. He considered the presence of that stump to be evidence of long-term erosion. [92]
- d. Mr. Holland observed riprap on the shoreline of a resort across Wabedo Lake from the Spartz property. [93]
- e. It was Mr. Holland's opinion that the shoreline of the Spartz Property was subject to extensive erosion, and he described that erosion as "recent," which he defined as having occurred during the last ten years. Mr. Holland's opinion was based primarily on what he observed from examining the photographs that Mr. Ebnet had taken on the site in November 2002. [94] However, during his site inspection, he also observed evidence of bank erosion above the OHWL and riprap.
- 54. Dick Osgood has a master's degree in aquatic biology and is a principal in Osgood Consulting, which specializes in lake management planning. He made a site inspection of the Spartz property on May 19, 2004. Based on that site investigation, Mr. Osgood made the following observations and expressed the following opinions at the hearing:
 - a. It was Mr. Osgood's observation that there were bulrush stands in the water immediately adjacent to riprap over one-half of the length of the riprapped shoreline. It was his further opinion that the bulrush stands were most sparse near the shore (between 1 and 3 on a density scale of 1 to 10) and most dense offshore (density of 5 to 6). Because of the relative sparsity of the inshore bulrush stands, it was Mr. Osgood's opinion that they did not create enough wave dampening effect to create significant protection from shore erosion.
 - b. Mr. Osgood indicated that bulrush stands classically represented good habitat for fish, frogs, and other amphibians. It was his opinion that some of the riprap that was installed has some minor impact to bulrush plants, ^[97] but that the adverse impact was not significant in the context of the bulrush stands in the entire Wabedo Lake ecosystem.
 - c. It was further Mr. Osgood's opinion that riprap can adversely affect some fish and amphibians in near shore zones, but the fact that the area of the

Spartz Property has already planted with turf had already created many of those adverse effects.

d. Finally, it was Mr. Osgood's overall opinion that "[t]he rip rap damage to bulrush, and therefore impacts to fish and wildlife, is minor," and that "[t]he impacts to the lake's fisheries from this project are extremely small compared to angling." [98]

ALJ Findings Relating to Project Impact:

- 55. The riprapped shoreline of the Spartz property is the only portion of the Lake Wabedo shoreline on which riprap has been installed. [99]
- 56. Prior to the installation of the riprap on the Spartz Property on December 28 and 29, 2002, there were a small number of isolated pockets of undercutting along the shoreline, ranging from a few inches to a few feet in length. The depth of most of the undercutting is indeterminable, and most of the areas that were undercut were heavily vegetated and therefore relatively stable. There were also a few isolated areas of possible bank slumping. Evidence of erosion on that shoreline did not include baring of soil, and only a minimal amount of shoreline material was being lost annually as the result of erosion. The vast majority of the Spartz Property shoreline was unaffected by any kind of erosion.
- 57. The riprap that was installed on the Spartz Property shoreline covered those portions of near-shore bulrush stands that lay between the toe end of the riprap in the adjacent lakebed and Wabedo Lake's existing water level. The riprap also acts as a barrier to prevent propagation of those bulrush stands shoreward if and when the level of Wabedo Lake rises above the current level in the future. By destroying the shoreward edge of adjacent bulrush stands and preventing their shoreward propagation in the future, the riprap eliminated present and future habitat for several fish species, amphibians, and wetland bird species and was therefore detrimental to significant fish and wildlife habitat. [104]
- 58. Along most of the length of the Spartz Property's lakeside property line there is a buffer zone of trees, shrubs and other natural vegetation that separates the immediate shoreline from inland areas of turf. The continuous 410 feet of riprap eliminates the transition zone between upland and shoreline habitat areas and creates a lengthy barrier that prevents many species of wildlife from traveling under cover from that upland buffer zone to feeding areas along the shoreline. So in that respect, the riprap that was installed is also detrimental to significant fish and wildlife habitat.

Other Findings:

- 59. These Findings are based on all of the evidence in the record. Citations to portions of the record are not intended to be exclusive references.
- 60. The Memorandum that follows explains the reasons for these Findings of Fact, and to the extent that the Memorandum may contain additional findings of fact,

including findings on credibility, the Administrative Law Judge incorporates them into these Findings.

61. The Administrative Law Judge adopts as Findings any Conclusions that are more appropriately described as Findings.

Based upon these Findings of Fact, the Administrative Law Judge makes the following:

CONCLUSIONS

- 1. Minnesota law gives the Administrative Law Judge and the Commissioner of Natural Resources authority to conduct this contested case proceeding and to make findings, conclusions, and recommendations or a final order, as the case may be. [107]
- 2. The Department gave proper and timely notice of the hearing, and it also fulfilled all procedural requirements of law and rule so that this matter is properly before the Administrative Law Judge.
- 3. Minnesota law^[108] establishes the burden of proof and of producing evidence in contested case hearings on after-the-fact permit applications:

In permit applications, the applicant has the burden of proving that the proposed project is reasonable, practical, and will adequately protect public safety and promote the public welfare.

- Minn. R. pt. 1400.7300, subp. 5, requires a permit applicant to "prove the facts at issue by a preponderance of the evidence." Among other things, those burdens require an applicant to prove by a preponderance of the evidence that the work covered by the permit application conforms to all of the requirements of applicable statutes and rules. [109]
- 4. Minn. R. pt. 6115.0216, subp. 2D, provides that "[t]he protection of shoreline from continued erosion by placement of natural rock riprap along the shore shall be approved if ... the encroachment into the water is the minimum amount necessary to provide protection ..." A preponderance of the evidence established that the encroachment into public waters of the riprap that was placed on the shoreline of the Applicant's property is far in excess of the minimum amount necessary to protect that shoreline from erosion. The Applicant therefore failed to establish by a preponderance of the evidence that the work covered by his permit application conforms to the requirements of Minn. R. pt. 6115.0216, subp. 2D. [110]
- 5. Minn. R. pt. 6115.0215, subp. 3A, expressly prohibits protection or restoration work in public waters that "is detrimental to significant fish and wildlife habitat and there are no feasible, practical, or ecologically acceptable means to mitigate the

- effects." A preponderance of the evidence established that the riprap that was placed in public waters adjacent to the Applicant's property has been and will be detrimental to significant fish and wildlife habitat, and that there are no feasible, practical, or ecologically acceptable means to mitigate the effects. The Applicant therefore failed to establish by a preponderance of the evidence that the work covered by his permit application is in conformity with Minn. R. pt. 6115.0215, subp. 3A. [111]
- 6. Minn. R. pt. 6280.0250, subp. 2C, requires a person performing work in public waters to obtain an aquatic plant management permit before destroying emergent aquatic macrophytes, such as bulrush plants. A preponderance of the evidence established that the riprap that was placed in public waters adjacent to the Applicant's property destroyed emergent bulrush plants, and that the Applicant has never applied for or obtained an aquatic plant management permit. The Applicant therefore failed to establish by a preponderance of the evidence that the work covered by his permit application is in conformity with Minn. R. pt. 6280.0250, subp. 2C. [112]
- 7. As a condition for installing riprap on a shoreline, Minn. R. pt. 6115.0215, subp. 5E, requires that "the proposed project [be] consistent with applicable floodplain, shoreland, and wild and scenic rivers management standards and ordinances for the waters involved." A preponderance of the evidence established that the riprap that was placed in public waters adjacent to the Applicant's property is not consistent with the standards expressed in the County's shoreland management ordinances because the Applicant's shoreline, both above and below the OHWL, was not a location where an "active erosion problem" existed, within the meaning of the applicable County ordinance. The Applicant therefore failed to establish by a preponderance of the evidence that the work covered by his permit application is in conformity with Minn. R. pt. 6115.0215, subp. 5E. [113]
- 8. By failing to establish by a preponderance of the evidence that the work covered in his permit application was in conformity with all applicable rules, the Applicant failed to establish by a preponderance of the evidence that his permit application is reasonable, practical, and will adequately protect public safety and promote the public welfare.

9. Minn. Stat. § 103G.315, subd. 7(a), provides that:

The commissioner may include in an order issuing or denying a permit a requirement for the applicant to take an action necessary to restore the public waters or their beds to the condition existing before unlawful activities, if any, were undertaken by the applicant. The restoration may include filling beds unlawfully dredged, removing fill unlawfully placed, or restoring water unlawfully appropriated.

The magnitude and extent of the riprap installation represented an extreme and unwarranted response to the minor erosion problem that previously existed on the Applicant's property, and it resulted in unnecessary damage to significant fish and wildlife habitat. It is therefore in the public interest that actions be taken to restore the Spartz Property shoreline to the conditions that existed before the riprap was installed. [114]

- 10. The Administrative Law Judge adopts as Conclusions any Findings that are more appropriately described as Conclusions.
- 11. The Memorandum that follows explains the reasons for these Conclusions, and the Administrative Law Judge therefore incorporates that Memorandum into these Conclusions.

Based upon these Conclusions, and for the reasons explained in the accompanying Memorandum, the Administrative Law Judge makes the following:

RECOMMENDATION

The Administrative Law Judge therefore respectfully RECOMMENDS:

- (1) That the Commissioner DENY the application of Frank Spartz for a permit allowing installation of riprap in the public waters of Wabedo Lake; and
- (2) That the Commissioner ORDER Frank Spartz to take such action as the Commissioner may deem necessary and appropriate to restore the public waters of Wabedo Lake or its bed to the condition existing before the existing riprap was installed.

Dated this 17th day of September 2004.

S/ Bruce H. Johnson
BRUCE H. JOHNSON
Administrative Law Judge

Reported: Tape Recorded (nine tapes); No Transcript Prepared.

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NOTICE

Under Minnesota law, [115] the Commissioner of Natural Resources is required to serve his final decision upon each party and the Administrative Law Judge by first-class mail.

MEMORANDUM

I. Applicable Law.

A. Jurisdiction.

On December 16, 2003, a Commissioner's Order was issued denying Mr. Spartz' application for an after-the-fact permit for riprap that had been installed on the shoreline of the Spartz Property on December 28 and 29, 2002. The Commissioner had waived a public hearing on that permit application. Minn. Stat. § 103G.311, subd. 5, provides that if a hearing is waived and a permit application is denied, the applicant may file a demand for a hearing on the application. Mr. Spartz made a timely demand for a hearing, which by law must be conducted as a contested case hearing under Minn. Stat. ch. 14. [116] And on May 17, 2004, the Commissioner issued a Notice of and Order for Hearing that initiated this contested case proceeding. [117]

B. Burden and Standards of Proof

Minn. Stat. § 103G.315, subd. 6(a), provides that:

In permit applications, the applicant has the burden of proving that the proposed project is reasonable, practical, and will adequately protect public safety and promote the public welfare.

The public policy of the state is largely defined by statutes enacted by the legislature and by agency rules adopted pursuant to statutory grants of authority from the legislature. Rules have the full force and effect of statutes. In order to provide adequate protection for public safety and to promote the public welfare, the work for which a permit is being sought must therefore conform to the requirements of applicable statutes and rules. A fundamental principle of Anglo-American jurisprudence is that members of the executive branch, including the heads of state agencies, must abide by the law, including their own rules. Or to frame the proposition somewhat differently, a permit application that involves violations of the law is presumptively unreasonable. [118]

The Spartz Project Does Not Conform to Rules Governing Riprap as an Erosion Prevention Measure.

A. The Evidence Established the Existence of Only Isolated Pockets of Prior Erosion.

The major issue of disputed fact in this case is the extent to which there was bank erosion along the Spartz Property shoreline before Mr. Ebnet installed 410 lineal feet of riprap on that bank on December 28 and 29, 2002. Every witness at the hearing addressed that issue, and the opinions about that varied widely. The issue of prior erosion is further complicated by the fact that the only witnesses who actually saw the shoreline before the riprap was installed were Mr. Spartz, his contractor Mr. Ebnet, and Messrs. Wright and Sumption from the County's Environment Services Department. The Department's conclusion that there was no evidence of "continuous erosion," within the meaning of Minn. R. pt. 6115.0216, subp. 2, is largely dependent on the personal observations of Messrs. Wright and Sumption in early December 2002. Their conclusions are complicated by the fact that they are framed in terms of the County's permit requirements that require the existence of "active erosion." The Department's requirement is framed in terms of "continuous erosion." However, both terms incorporate the idea of "ongoing erosion." [121] As noted below, the annual loss of shoreline on the Spartz Property appears to have been so minor that the County inspectors did not consider the erosion to be "active" within the meaning of the County ordinance. But even minor erosion over a period of years could fall within the definition of "continuous erosion" as that term is used in Minn. R. pt. 6115.0216, subp. 2.

As indicated above, witnesses differed widely about the existence and extent of any continuous erosion on the Spartz property before the riprap was installed. Mr. Spartz testified that he had observed erosion of his shoreline over a period of ten years, but on his application for a County permit he noted that "some areas eroding but not much shoreline." [122] Mr. Ebnet was more specific in his testimony about the presence of erosion. He testified that he observed "quite a bit" of undercutting on the bank—in one case as much as six to eight inches, banks with vertical faces in some locations, some rocks that had worked loose from the bank, and some trees apparently undercut and leaning over. [123] He illustrated his testimony with a series of ten photographs, which he indicated documented the presence of erosion. [124] But the photographs had marginal probative value, at best. They were taken in December when much of the ground was covered by snow, and it was extremely difficult for the ALJ to determine whether they depicted erosion or merely patches of ground that had not been covered by snow. So, the only evidence that Mr. Ebnet presented of erosion that had probative value was his own testimony. The testimony of Mr. Sumption, the Deputy Director of the County's Environmental Services Department, did corroborate Mr. Ebnet to a limited extent. Mr. Sumption testified that the County had found some evidence of undercutting of the bank but no evidence of slumping of banks or bared soil. Mr. Wright, the County inspector who inspected the site on December 2, 2002, saw no signs of active erosion, such as trees falling. [125] That was not necessarily inconsistent with Mr. Sumption's testimony, since he did not indicate whether the undercutting that the County had observed was currently "active," as opposed to evidence of erosion that had been continuing over some period of time but currently inactive.

Messrs. Holland and Osgood both inspected the property in May 2004, nearly a year and a half after the riprap was installed. So their observations have only limited probative value in establishing the existence of erosion on the property prior to December 28, 2002. Both cited the existence of a weathered tree stump, approximately 5-1/2" in diameter, in the water approximately four feet out from the toe of the riprapped bank near the eastern edge of the riprap installation, as evidence that the shoreline had eroded inland more than four feet over some period of time. [126] But an equally reasonable hypothesis was that the stump's presence in the water was the result of a rising lake level over time. Mr. Holland also relied on three photographs he took depicting what appear to be four sloping birch trees as evidence of slumping banks. [127] The ALJ notes that all of the trees were located immediately landward of the riprap, and whether the sloping was caused by eroding banks is only one inference. Department officials English, Fierstine, and Kaplan also made site inspections of the property, but again well after the riprap was installed. So their direct testimony about an absence of evidence of continued erosion suffers from the same weaknesses as Messrs. Holland and Osgood.

In summary, there was evidence that established the existence of a few isolated pockets of undercutting, ranging from a few inches to a few feet in length. [128] With one exception, there was no evidence establishing how deeply the bank may have been undercut. [129] Moreover, most of the area identified as having been undercut appeared to have been heavily vegetated and, therefore, relatively stable. [130] And, at best, there may have beenthree isolated areas of banks beginning to slump, as evidenced by sloping trees. [131] There was no evidence of a significant loss of shoreline material on an annual basis. Rather, any loss of material appears to have been measurable in terms of a few inches in small, isolated locations over a period of years. And all of that evidence must necessarily be viewed in the context of a 580-foot shoreline, 410 feet of which was riprapped. So, even viewing the testimony of Mr. Ebnet and Mr. Holland and the photographs they took in a generous light, the Applicant was only able to establish the existence of some very limited erosion along the his shoreline before riprap was installed. And he failed to establish the existence of widespread, continued erosion along the vast majority of that shoreline.

B. The Spartz Project's Encroachment on Public Waters Was Well Beyond What Was Minimally Necessary to Provide Protection.

Minn. R. pt. 6115.0216, subp. 2D, provides that "[t]he protection of shoreline from continued erosion by placement of natural rock riprap along the shore shall be approved if ... the encroachment into the water is the minimum amount necessary to provide protection ..." Although the ALJ has concluded that the Spartz Project minimally meets the rule's threshold "continued erosion" test, the project falls far short of meeting this rule requirement. The situation that confronted the Applicant was a small number of isolated pockets of undercutting along the shoreline, ranging from a few inches to a few feet in length and three isolated areas of possible bank slumping, as evidenced by

sloping trees.^[132] The response was installation of riprap on 410 feet of shoreline, the vast majority of which exhibited no evidence of continued erosion. In other words, the riprap that was installed went far beyond what was minimally necessary to provide protection.

Similarly, Minn. R. pt. 6115.0215, subp. 5, provides that a permit for the kind of work that the Applicant has completed shall be granted only if each of seven specified conditions are met. One of those conditions is that "the project does not exceed more than a minimum encroachment, change, or damage to the environment, particularly the ecology of the waters." For the reasons discussed above, the Spartz Project also fails to meet that test.

C. The Evidence Failed to Establish Other Riprap Installations on Wabedo Lake.

Although it is somewhat parenthetical to this inquiry, Mr. Holland testified that when he was making his site inspection of the Spartz Property on May 25, 2004, he saw what he believed to be riprap "across the lake in front of a resort." Although not determinable of the issues in this proceeding, the implication was that the Department had either approved or failed to take remedial action against a similar project on the Lake Wabedo shoreline. But a preponderance of the evidence failed to establish that. There was no evidence that Mr. Holland followed up by inspecting the shoreline to verify the presence of another riprap project. On the other hand, Mr. English testified that the Department had never approved a permit for any other riprap installation on Wabedo Lake or elsewhere in eastern Cass County. He also testified that he himself had been to Wabedo Lake on several occasions and had never observed any other riprap installation. Under the circumstances, the ALJ found Mr. English's testimony about other riprap installations on Wabedo Lake more reliable than Mr. Holland's limited and distant observations. The ALJ therefore found that there are no other riprap installations on Wabedo Lake.

III. The Spartz Project Is Detrimental to Significant Fish and Wildlife Habitat

Minn. R. pt. 6115.0215, subp. 3A expressly prohibits protection or restoration work in public waters that "is detrimental to significant fish and wildlife habitat and there are no feasible, practical, or ecologically acceptable means to mitigate the effects." There was no dispute among experts that bulrush stands represent important habitat for fish, frogs, and other amphibians. But there was disagreement about the proximity of bulrush beds to the shoreline, their relative density, and the extent to which riprap had been placed on near shore bulrush plants. All three of those factors affect whether or not the riprap "will be detrimental to significant fish and wildlife habitat," within the meaning of Minn. R. pt. 6115.0215, subp. 3B.

Mr. Osgood suggested that the bulrush stands in the lakebed adjacent to the Spartz Property primarily lay eight to ten feet from the shoreline and extended from there to about 50 yards offshore. During his testimony, he offered a further opinion that the bulrush stands were most sparse near the shore (between 1 and 3 on a density scale of 1 to 10) and denser offshore (density of 5 to 6). Mr. Osgood then concluded that because of the relative sparsity of the inshore bulrush stands, those stands did not create enough wave dampening effect to create significant protection from shore erosion. On the other hand, Mr. Fierstine testified that while at the site, he observed luxuriant bulrush growth along much of the riprapped shoreline. The ALJ concluded that Mr. Fierstine's observations of the location and density of adjacent bulrush stands was the most credible and accurate. His observation of dense and "luxuriant" bulrush stands immediately adjacent to much of the rip-rapped shoreline is amply corroborated by photographic evidence introduced by both the Department of Mr. Spartz. [137]

In his testimony, Mr. Ebnet tended to minimize the amount of near shore bulrush plants that had been covered by riprap but conceded that some coverage had occurred.[138] In fact, a photograph that was taken while Mr. Ebnet was on the site in October 2003 clearly shows riprap covering bulrush plants. [139] Mr. Osgood testified that it was possible that a portion of the riprap had covered bulrush plants. But in a written report dated June 24, 2004, he was less equivocal, stating, "[A]bout 175 feet adjacent to the rip rap may have affected bulrush (sic), but again, this is minor, extending only a few feet into the lake."[140] In a report dated April 28, 2003, Mr. English stated, "There may be some bulrush covered by the rock, although it appears to be a minor amount." But it must be borne in mind that Mr. English wrote that the day before he and Mr. Fierstine made their first site inspection of the property. That characterization was, therefore, necessarily based on someone else's opinion and is clearly contracted by what they found on April 29, 2003, and by the photographic evidence that Mr. Spartz introduced showing what the shoreline looked like in the summer. [142] In short, a preponderance of the evidence established that some bulrush plants were covered by riprap along at least 175 feet of the riprapped shoreline, and that the extent of the coverage varied from a few inches to several feet.

Finally, there is the question of the extent to which the riprap was "detrimental to significant fish and wildlife habitat." Mr. Osgood concluded that the riprap damage to bulrush plants was "minor" and that "[t]he impacts to the lake's fisheries from this project are extremely small compared to angling." It was clear from Mr. Osgood's testimony that he was viewing the loss of habitat from a lake-wide perspective, and that he meant that the damage to bulrush was "minor" in comparison with the amount of bulrush stands that remained throughout the lake. On the other hand, Mr. Fierstine concluded that:

"Near-shore and shoreland areas are critical habitats for fish populations and associated water dependent wildlife. Studies conducted in Wisconsin have documented negative changes in amphibians and fish communities due to the placement of riprap on natural shorelines. The placement of riprap by the applicant on the shoreline of Wabedo Lake that had no

evidence of shoreline erosion has degraded near-shore habitat that is critical to fish and amphibians." [144]

Mr. Fierstine also testified that since bulrush seeds must germinate on dry land, the riprap also acted as a barrier to prevent propagation of those bulrush stands shoreward if and when the level of Wabedo Lake rises above the current level in the future. By implication, the riprap has also eliminated future habitat for several fish species, amphibians, and wetland bird species and was therefore detrimental to significant fish and wildlife habitat. [145]

Mr. Naplin testified that the riprapped bank created a lengthy barrier that prevented many species of wildlife from traveling under cover from the shoreline to that buffer zone. So the riprap was also detrimental to significant fish and wildlife habitat in that way. Mr. Osgood did not believe that to be the case based on the fact that "the area upland from the rip rap is largely turf, and this may have already affected any fish or wildlife." The problem with Mr. Osgood's qualification is that it ignores the buffer zone, extending along most of the Spartz Property shoreline, of trees, shrubs and other natural vegetation that separates the immediate shoreline from inland areas of turf. The presence of the existing buffer zone gives credence to Mr. Naplin's assessment of the impact on wildlife.

In the final analysis, Mr. Osgood, Mr. Fierstine, and Mr. Naplin all agree that the riprap that was installed on the Spartz Property has had some detrimental impact on fish and wildlife habitat. They differed about whether that detrimental impact is "significant" within the meaning of Minn. R. pt. 6115.0215, subp. 3A. The Applicant, relying on Mr. Osgood's views, interprets the term "significant" solely as a quantitative measure. It was Mr. Osgood's opinion that the amount of habitat that was adversely affected by the riprap on the Spartz Property was very minor in comparison with the amount of similar habitat that still remains along the shoreline of Wabedo Lake. There are several problems with the Applicant's interpretation—both conceptual and evidentiary.

First of all, when one considers the rule's underlying purposes, one must conclude that the term "significant" is not a quantitative measure or standard. Rather, the term "significant" must be read to mean that the habitat that has been damaged must be habitat that is significant to fish and wildlife. The rule was not intended to establish a quantitative calculus that compares the habitat lost with the habitat that remains in the affected public water. Such a reading would result in the piecemeal destruction of habitat over time, since it would be rare for the habitat destruction from any single project to have quantitative significance from a lake-wide perspective. In fact, the Minnesota Court of Appeals has previously rejected such an argument by a permit applicant in *Roach v. Commissioner of Department of Natural Resources*. But even if one were to accept the Applicant's interpretation of "significant" as a quantitative standard, there was a failure of proof here. There is no evidence in the record that establishes, for example, the extent of bulrush stands along the rest of the shoreline of the lake. Without that information a quantitative judgment about the impact of riprap on the Spartz Property is speculative.

Statutes and rules must also be interpreted in ways that give effect to all of their provisions. And when one considers this rule in its larger context, it is clear that the "significance" of any habitat destruction must also be assessed in terms of necessity. For example, Minn. R. pt. 6115.0190, subp. 5, provides, among other things, that:

Subp. 5. **Permits required**. Permits are required for the placement of fill in public waters, except as provided under subparts 3 and 4, and a project must meet all of the following requirements:

* * *

A. the project does not exceed more than a minimum encroachment, change, or damage to the environment, particularly the ecology of the waters:

* * *

E. the proposed project represents the minimal impact solution to a specific need with respect to all other reasonable alternatives;

Additionally, Minn. R. pt. 6115.0216, subp. 2D, provides that "the encroachment into the water [must be] the minimum amount necessary to provide protection," and Minn. R. pt. 6115.0216, subp. 4e(6) prohibit any riprap that covers "emergent vegetation, unless authorized by an aquatic plant management permit." In short, reading all of these rule provisions together, the ALJ concludes that the term "significant," as used in Minn. R. pt. 6115.0215, subp. 3A, also means any loss of fish or wildlife habitat beyond what is absolutely necessary to provide protection against the erosion problem that actually exists on a particular area of shoreline. The habitat loss here fails that test. Riprap was installed on 410 feet of shoreline to provide protection from erosion that, at best, affected only a fraction of that shoreline. Most of the habitat loss here was unnecessary and therefore "significant" within the meaning of the rule.

Minn. R. pt. 6115.0215, subp. 3A is framed in terms of an express prohibition of riprap work unless a specified condition is met. So, even where work in public waters may be detrimental to significant fish and wildlife habitat, a permit may still be granted if "there are ... feasible, practical, or ecologically acceptable means to mitigate the effects." As previously noted, Mr. Spartz bears the burden in this proceeding of proving compliance with all applicable rules. There is simply no evidence in the record even suggesting that, with the riprap in place, there is some feasible, practical, or ecologically acceptable means to mitigate its detrimental effects. Rather, there was considerable evidence to the contrary. For example, the evidence established that when riprap is placed on bulrush plants, it kills them; they cannot regenerate while the riprap is there, and the mere presence of the riprap prevents them from propagating shoreward in periods of higher water. [149]

Minn. R. pt. 6115, subp. 4E(6) provides in substance that riprap may not be installed on a shoreline without a permit if the riprap covers "emergent vegetation, unless authorized by an aquatic plant management permit." Mr. Spartz has never applied for or received an aquatic plant management permit. When Mr. Ebnet installed riprap on the shoreline of the Spartz Property in December 2002, he covered emergent bulrushes. As a result, that unpermitted riprap installation violated Minn. R. pt. 6115, subp. 4E(6). Minn. R. pt. 6280.0250, subp. 2C, requires a person performing work in public waters to obtain an aquatic plant management permit before destroying emergent aquatic macrophytes, such as bulrush plants. The Spartz Project violated that rule when it was performed in December 2002, and it remains in violation of that rule.

V. The Spartz Project Is Not Consistent With the County's Shoreland Management Standards

A goal of the Department is "to limit the placement of any fill material into public waters in order to ... maintain consistency with floodplain, shoreland, and wild and scenic rivers management standards and ordinances."[151] One method the Department has selected to accomplish that goal is to prohibit restoration work that "violates the regulations of any local zoning authority or water management agency."[152] Another method is to grant permits for restoration work only when "the proposed project is consistent with applicable floodplain, shoreland, and wild and scenic rivers management standards and ordinances for the waters involved."[153]

The County's jurisdiction under its Shoreline Alteration Ordinance^[154] only covers work done above the OHWL, since work done below that line represents work done in state public waters is within the Department's exclusive statutory jurisdiction. There was a dispute among witnesses about whether some of the riprap, as originally installed, was located above the OHWL and therefore within the County's jurisdiction.^[155] Under the doctrine of collateral estoppel, that some of the riprap was once located within the County's jurisdiction was conclusively adjudicated when Mr. Spartz pleaded guilty and was convicted in Cass County District Court of violating the County's Shoreline Alteration Ordinance.^[156] But it was also undisputed that sometime after September 8, 2003, any riprap above the OHWL was removed, and that the project came into compliance with the applicable County ordinance.^[157] So, actual violation of the County ordinance cannot now be a basis for denying Mr. Spartz' application for an after-the-fact permit.

The inquiry then turns to whether the project is consistent with the County's shoreland management standards and ordinances, as required by Minn. R. pt. 6115.0215, subp. 5E. The Applicant appears to argue that his project cannot be considered to be inconsistent with those standards and ordinances for two reasons. First, he suggests that since his project no longer impacts shoreland within the County's jurisdiction (i.e., above the OHWL), it necessarily cannot be considered to be inconsistent with applicable County standards and ordinances. But under that interpretation, the Department could never legitimately elicit the views of counties or other local units of government in connection with restoration projects that only

impacted state public waters. That takes too narrow a view of the Department's goal in Minn. R. pt. 6115.0190, subp. 1C, to limit placement of fill materials in ways that "maintain consistency with floodplain, shoreland, and wild and scenic rivers management standards and ordinances." In other words, the ALJ concludes that the intent of Minn. R. pt. 6115.0215, subp. 5E, is to grant permits for restoration work only when the project is consistent with both the letter and underlying purposes of local shoreland management standards and ordinances.

With regard to the project's consistency with the purposes of the County's shoreland management ordinances, the Applicant first argues that Messrs. Sumption and Wright are incompetent to offer opinions about that. He contends that the testimony of Messrs. Sumption and Wright should be taken as testimony of "common witnesses," with their conclusions not being taken as "governmental positions." But the ALJ concludes that Mr. Sumption had the authority to advise the Department on whether Mr. Spartz' permit application was consistent with County shoreland management practices and ordinances. Mr. Sumption testified that he served as Deputy Director of the County's Environmental Services Department, and that that the duties delegated to him by the County Board included making determinations of whether applications for County shoreland alteration permits were consistent with existing County policies, standards, and ordinances. Applying legislated policies, standards, and requirements to particular fact situations is a traditional executive function and one that Mr. Sumption was authorized and competent to perform in this case. [159]

The Applicant argues that proceedings under Minn. Stat. §§ 103G.311 and 103G.315 are in the nature of de novo proceedings—that is, they require an independent reconsideration of the permit that was previously denied in the Commissioner's Order of December 16, 2003. Based on that characterization, the Applicant contends that any evidence that the Department elicited during the earlier permit application process is inadmissible as substantive evidence in this proceeding for example, to establish the truth of the matter asserted in a document contained in that record. [160] Specifically, the Applicant suggests that Mr. Sumption's written response to the Department's request for comments during the permit application process (Exhibit 18) may be admissible to establish the regularity of that process but is inadmissible as substantive evidence in this proceeding to establish the County's position on the project's consistency with its shoreland management standards and ordinances. The ALJ disagrees. Minn. Stat. § 14.60, subd. 1, provides that "[i]n contested cases agencies may admit and give probative effect to evidence which possesses probative value commonly accepted by reasonable prudent persons in the conduct of their affairs." Moreover, subdivision 2 of the same statute provides that "[a]II evidence ... in the possession of the agency of which it desires to avail itself or which is offered into evidence by a party to a contested case proceeding, shall be made a part of the hearing record of the case." Exhibit 18 meets the criteria for admissible evidence in both subdivisions. Moreover, as a written report of the regularly conducted activity of a public body, it would therefore likely be admissible in a proceeding governed by the Minnesota Rules of Evidence. Exhibit 18 was probative of the County's position on

consistency on December 11, 2003, and the testimony of Mr. Sumption established that the County has not subsequently changed that position. [161]

So, the ALJ must next consider whether or not Mr. Spartz' permit application is consistent with existing County policies, standards, and ordinances. Based on the evidence in the record, the ALJ concludes that it is not consistent. The County shoreland alteration ordinance itself clearly expresses a policy of discouraging riprap projects where "active erosion problems" do not exist. That was the thrust of Mr. Sumption's testimony, as well as his written response to the permit application that the Department denied on December 16, 2003. Even though the County may not have jurisdiction over such activities below the OHWL, it clearly has an interest in what happens there.

VI. Remedy

As previously discussed, determining the appropriate resolution of this case is complicated by a lack of information about the condition of the Spartz Property shoreline before the riprap was installed. The only photographic evidence was obtained in winter when the shoreline was covered by snow. That was also when County officials made their pre-installation inspection of the site. The only other evidence is the testimony of Mr. Ebnet, who has an interest in the outcome of this proceeding. But even viewing Mr. Ebnet's testimony in the light most favorable to the Applicant establishes the existence of only a very minor and isolated erosion problem. At best, there was strong evidence of a slumping bank in only one location. There was no evidence of baring of soil. Most of the evidence of erosion consisted of some minor undercutting of the shoreline—again, at isolated locations along the property's 580 feet of shoreline. Viewed from a different perspective, the evidence only established a loss of shoreline material measurable in inches, over a period years, in a few isolated places.

Against this backdrop, riprapping 410 feet of shoreline was a response that was wholly out of proportion to the magnitude of the problem. The vast majority of that riprap, as it lies along the shoreline today, is serving no protective purpose whatever. To the extent that there was some minor erosion, it consisted almost exclusively of some rather shallow undercutting of shoreline at or near the water's edge. It is not even clear that riprap is the best solution for that. And even if it were, it would be impossible today to determine where riprap might be left to protect the shoreline from that minor undercutting. In contrast, while serving no significant protective purpose, the riprap has impaired fish and wildlife habitat and continues to do so. It is therefore the ALJ's recommendation that the Commissioner order all of the riprap to be removed and that the shoreline of the Spartz Property be restored, as nearly as possible, to its pre-existing condition. Thereafter, if the Applicant encounters perceptible and measurable erosion problems, he should seek a permit or permits to take measures that properly address the problems that he actually encounters.

Minnesota Statutes, section 14.61. (Unless otherwise specified, all references to Minnesota Statutes are to the 2002 edition.)

- [3] Testimony of Frank Spartz; Exhibits 1 and A.
- [4] Exhibit D.
- ^[5] Exhibits 11 and 12.
- [6] Datum 1929. (See Exhibit E).
- Exhibit A.
- [8] *Id.*
- [9] Testimony of Frank Spartz.
- [10] Exhibits 4-N, H-15, and H-65.
- [11] Testimony of Frank Spartz.
- [12] Exhibits A and H-1 through H-75.
- [13] Testimony of James Holland and Richard Osgood.
- [14] Testimony of Ted Ebnet and James Holland.
- [15] Testimony of Kirk English.
- [16] *Id.*; Exhibit 11.
- [17] Testimony of Kirk English.
- [18] Testimony of Harlan Fierstine.
- Testimony of James Holland and John Sumption.
- [20] Testimony of John Sumption.
- [21] Testimony of James Holland and John Sumption.
- [22] Testimony of Exhibits H-58 through H-75.
- [23] Testimony of Dick Osgood.
- [24] Testimony of Harlan Fierstine.
- [25] Testimony of Dick Osgood.
- [26] Testimony of Dick Osgood
- Testimony of Dick Osgood and Harlan Fierstine.
- [28] Testimony of Dick Osgood and Harlan Fierstine; Exhibits 59 through 75. See discussion in Part III of the Memorandum that follows.
 - [29] Testimony of Dick Osgood.
 - [30] *Id.*
 - [31] Exhibit D.

^[2] See Minn. Stat., § 14.62, subd. 2a.

- [32] Testimony of Dick Osgood and Harlan Fierstine.
- [33] Testimony of Harlan Fierstine.
- [34] Testimony of Robin Naplin.
- [35] Testimony of Ted Ebnet and Frank Spartz.
- [36] Testimony of Frank Spartz.
- [37] Testimony of Ted Ebnet.
- [38] *Id.*
- [39] *Id.*; Exhibits H-1 through H-10. The locations along the Spartz Property shoreline where Mr. Ebnet took each of the photographs are identified on Exhibit A.
 - [40] Exhibits H-1 through H-10.
 - [41] Testimony of Ted Ebnet.
- The permit application indicated 430 feet of riprap, but the project ultimately involved only about 410 feet of riprap. (*Compare* Exhibit 1 with Exhibit A.)
 - [43] Exhibit 1
 - [44] Exhibit 3.
 - [45] Cass County Ordinances § 1704 D. See Exhibit 2.
 - [46] Testimony of John Sumption.
 - [47] Exhibit 3; testimony of Robert Wright.
 - [48] Testimony of John Sumption; Exhibits 1 and 3.
 - [49] Exhibit 3.
 - [50] Cass County Ordinances § 1704 C 7. See Exhibit 2.
- [51] In a telephone conversation with Conservation Officer Douglas Sandstrom, Mr. Ebnet stated that he did make a telephone call to the Department's Area Hydrologist Kirk English to determine whether a state permit was required and that Mr. English had told him, "[T]hat sounds like it should work." But that statement was controverted by Mr. English in his testimony and by his official telephone log (Exhibit 26). The ALJ therefore finds that no such telephone conversation ever took place.
- Exhibit 26; testimony of Kirk English. The evidence failed to establish whether or not County officials did tell Mr. Spartz or Mr. Ebnet that the project would likely require a permit from the Department.
 - [53] All further references to Minnesota Rules are to the 2003 edition, unless otherwise specified.
 - [54] Testimony of Ted Ebnet.
 - [55] Id.; testimony of Frank Spartz.
 - [56] Testimony of Ted Ebnet.
 - [57] Testimony of Ted Ebnet.
 - [58] Exhibits 1 and A; testimony of Ted Ebnet.
 - [59] *Id.*
 - [60] See discussion in Part V of the Memorandum that follows.
 - [61] See discussion in Part III of the Memorandum that follows.
 - [62] Testimony of Harlan Fierstine; Exhibit 14.
 - [63] Exhibits 4A through 4D.
 - [64] Exhibit 3; testimony of Robert Wright.
 - [65] Exhibit 3.
 - [66] Testimony of Ted Ebnet.
 - [67] Exhibit 10.
 - [68] Exhibits 13-A through 13-M.
 - [69] Exhibit 14.
 - [70] Exhibit 5.

- [71] *Id.*
- [72] Exhibit 5.
- [73] Id.; testimony of Robert Wright. See discussion in Part V of the Memorandum that follows.
- [74] Exhibits 4-E through 4-H.
- [75] Testimony of Robert Wright.
- [76] Exhibit 15.
- [77] Exhibit 16.
- [78] Exhibits 17-A through 17-M.
- [79] Exhibit 16; testimony of Kirk English.
- [80] Exhibit 18.
- [81] Testimony of Harlan Fierstine.
- [82] Exhibit 19.
- [83] Minn. Stat. § 103G.311, subd. 5.
- [84] Exhibit 28.
- [85] Although the expert observations and opinions that follow might not fall within the precise definition of findings of fact, the ALJ is including themfor convenience of review of this report by the Commissioner. The ALJ also accepted observations made and opinions given by Ted Ebnet, Robert Wright, Kirk English, and Harlan Fierstine, to the extent of their established expertise and as reflected in previous findings, as expert opinion testimony.
 - [86] Exhibit 24.
 - [87] Testimony of Rob Naplin.
 - [88] Testimony of Rob Naplin.
 - [89] *Id.*; Exhibit 24.
 - ^[90] *Id*.
 - [91] Exhibit C.
 - [92] See discussion in Part II-A of the Memorandum that follows.
- [93] See shoreline marked in green on Exhibit 11. See discussion in Part II-C of the Memorandum that follows.
 - [94] Exhibits H-1 through H-10.
 - ^[95] See Exhibits 27-32.
 - [96] Testimony of Dick Osgood.
 - [97] Testimony of Dick Osgood; Exhibit G.
 - [98] Exhibit G.
 - [99] Id. See discussion in Part II-C of the Memorandum that follows.
 - [100] Testimony of Ted Ebnet; Exhibits H-1 through H-6, H-8 through H-10, and H-30.
- [101] Testimony of Ted Ebnet; Exhibits H-1 through H-10. See discussion in Part II-A of the Memorandum that follows.
- [102] Testimony of Ted Ebnet and James Holland; Exhibits H-7, H-29, H-31, and H-32. See discussion in Part III of the Memorandum that follows.
 - [103] Testimony of John Sumption. See discussion in Part II-A of the Memorandum that follows.
 - [104] Testimony of Harlan Fierstine. See discussion in Part III of the Memorandum that follows.
 - [105] Robin Naplin.
 - $\stackrel{\cdot}{\text{[106]}}$ See discussion in Part _ of the Memorandum that follows.
 - [107] Minn. Stat., §§ 14.50, 14.57, 14.69, and 103G.311 and 103G.315.
 - [108] Minn. Stat., § 103G.315, subd. 6(a).
 - [109] See discussion in Part I-B of the Memorandum that follows.

- [110] See discussion in Part II of the Memorandum that follows.
- [111] See discussion in Part III of the Memorandum that follows.
- [112] See discussion in Part IV of the Memorandum that follows.
- [113] See discussion in Part V. of the Memorandum that follows.
- [114] See discussion in Part VI. of the Memorandum that follows
 - Minnesota Statutes, section 14.62, subd. 1.
 - [116] Minn. Stat. § 103G.311, subd. 1.
- [117] Minn. Stat. § 103G.311, subd. 2(c), also requires publication of a public notice, which was done on June 3 and 10, 2004. (Exhibit 28)
 - [118] See, In the Matter of the Excavation of Erickson Lake, 392 N.W.2d 636, 639 (Minn. App. 1986).
 - [119] Cass County Ordinances § 1704 D (Exhibit 3).
- See Minn. R. pt. 6115.0216, subp. 2.

 [121] One could reasonably interpret the County's test as being a narrower one than the Department's. "Continuous" erosion may include erosion that has been occurring over a considerable period of that but that might not currently be "active." But "active erosion" would necessarily be "continuous," so long as it began any time in the past.
 - [122] Exhibit 1.
- [123] Testimony of Ted Ebnet. Only one of Mr. Ebnet's photographs provides evidence of a tree having been undercut and leaning over. (See Exhibit H7)
- [124] Exhibits H-1 though H-10. Corresponding numbers written on Exhibit A indicate the locations where each of the photographs was taken.
 - [125] Testimony of Robert Wright; Exhibit 1.
 - [126] Finding No. 54; testimony of Dick Osgood.
 - [127] Exhibits H-29, H-31, and H-32.
- [128] Testimony of Ted Ebnet; Exhibits H-1 through H-6, H-8 through H-10; testimony of James Holland; Exhibit 30. On cross-examination, Mr. Ebnet could not identify an area of undercutting that he believed exceeded about 6 feet in length. It is difficult to determine whether what is depicted in Exhibit H-30 is erosion or something else, such as a hole dug by an animal. Mr. Holland did not address that in his testimony.
 - [129] Mr. Ebnet testified that the undercutting that was depicted in Exhibit H-4 was 6" to 8" deep.
 - [130] Exhibits H-1 through H-6, H-8 through H-10.
- [131] Testimony of Ted Ebnet and James Holland; Exhibits H-7, H-29, H-31, and H-32. The evidence of slumping depicted in H-29, H-31, and H-32 assumes that a slumping bank is the only reason why a tree near the shoreline would be growing at an angle. Since those photographs were taken after the riprap was installed, it is impossible to determine whether there was bared soil on the bank beneath those trees, which would tend to establish that erosion was the cause of the leaning.
 - [132] See Finding No. 55 and discussion in Part I-A, above.
 - [133] Minn. R. pt. 6115.0215, subp. 5C.
 - [134] Mr. Holland marked locations where he though he saw riprap in yellow on Exhibit 11.
 - [135] See Findings Nos. 48, 51 and 53.
 - [136] Exhibits 17-A through 17-M.
- Exhibits H-58 through H-75. Compare those photographs with Exhibits 13 -A through 13-M, which were taken by Mr. English in April 29, 2003, shortly after the ice in the lake went out. If that is illustrative of what Mr. Osgood saw, it might account for his more conservative views of the proximity and density of near shore bulrush stands.
- [138] That testimony from Mr. Ebnet was given with reference to Exhibit 4-M, which depicts bulrush plants growing up through gaps in the riprap.
 - [139] Exhibit H-16: testimony of Ted Ebnet.

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[140] Exhibit G.
    [141] Exhibits 13-A through 13-M.
    [142] Exhibits H-58 through H-75.
    [143] Exhibit G.
    [144] Exhibit 22.
    [145] See discussion in Part I-A of the Memorandum that follows.
   [147] 356 N.W.2<sup>nd</sup> 432, 435 (Minn. App. 1984).
   [148] Minn. Stat. § 645.17(2); see Kirkwold Construction Company v. M.G.A. Construction, Inc., 513
N.W.2d 241, 244 (Minn. 1994).
    [149] Testimony of Harlan Fierstine.
   [150] See Finding No. 57 and discussion in Part III, above.
    [151] Minn. R. pt. 6115.0190, subp. 1C.
    [152] Minn. R. pt. 6115.0215, subp. 3D.
    [153] Minn. R. pt. 6115.0215, subp. 5E.
   [154] Cass County Ordinances, § 1704. (See Exhibit 2)
    [155] Compare testimony of Ted Ebnet with testimony of John Sumption and Robert Wright.
    [156] Exhibit 5.
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- Carrying the Applicant's argument to its logical conclusion would require the Department to only consider local legislative acts—*e.g.*, a resolution by a county board—as evidence of consistency or inconsistency in making the determination required by Minn. R. pt. 6115.0215, subp. 5E. And considering the entire regulatory scheme established by the Department's rules, the ALJ discerns nothing that suggests that the Department intended to be that self-limiting when it adopted this rule.
- Exhibit 18. In his Summation Brief (p. 13), the Applicant suggests that Mr. Sumption's written response to the earlier permit application is admissible to establish the regularity of that proceeding but should not be considered as substantive evidence in this proceeding of the County's position on the project's consistency with its shoreland management standards and ordinances. The ALJ disagrees. Exhibit 18 is a written report of regularly conducted activity. It established the County's position when it was issued on December 11, 2003, and the testimony of Mr. Sumption established that the County has not subsequently changed that position.

[161]
[162] Exhibit 2.
[163] Exhibit 19.

[157] Exhibit 6.

[158] Applicant's Summation Brief at p. 16.